

## 2009 Activity Descriptions & Learning Outcomes

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>3 X's A DAY</b>	WC	Using a model of two washroom sinks, students measure how much water is used by brushing their teeth with the water left running and by brushing their teeth with the water used only sparingly. Students are encouraged to ask questions and provide new insights on how we can save water in our homes.	<p><u>Energy and Control, Grade 3 (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>♦ identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us.</li> </ul> <p><u>Measurement, Grade 4 (Capacity, Volume and Mass)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of and an ability to apply appropriate metric prefixes in measurement and estimation activities</li> <li>♦ solve problems related to their day to day environment using measurement and estimation</li> </ul> <p><u>Energy and Control, Grade 5 (Conservation of Energy)</u></p> <ul style="list-style-type: none"> <li>♦ evaluate the reasons for conserving natural resources and identify possible ways of conserving energy.</li> </ul>	Tent A
<b>ABORIGINAL VOICES</b>	WA	Students gather to find out the prominent role that water plays in native culture and practice now and in ages past. This activity is run by teacher/elders from Chippawa's of Nawash.	<p><u>Heritage and Citizenship, Grade 3 (Pioneer Life)</u></p> <ul style="list-style-type: none"> <li>♦ Identify the contributions of aboriginal peoples to early settlement</li> </ul> <p><u>Heritage and Citizenship, Grade 4 (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>♦ compare a medieval community with their own community (including the Aboriginal "culture and beliefs")</li> </ul> <p><u>Heritage and Citizenship, Grade 5 (Aboriginal Peoples)</u></p> <ul style="list-style-type: none"> <li>♦ relationship between Aboriginal Peoples and their environment</li> </ul>	Outside

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>A-MAZE-ING WATER TREATMENT</b>	WS	<p>Students pretend to be drops of water entering a simulated water treatment plant. Find out what happens to municipally provided water before it enters the pipes to come into your home. Students will gain an understanding of how much has to be done to each drop of water that comes out of our taps and sprinklers and that we should conserve water as much as possible. Then tour an actual working Water Treatment Plant on site.</p>	<p><u>Energy and Control, <b>Grade 3</b> (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>♦ identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> </ul> <p><u>Heritage and Citizenship, <b>Grade 4</b> (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>♦ compare a medieval community with their own community (e.g., with respect to water treatment...)</li> </ul> <p><u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ identify and classify organisms according to their role in a food chain (e.g., producer, consumer)</li> <li>♦ describe ways in which humans can affect the natural world</li> </ul> <p><u>Life Systems, <b>Grade 5</b> (Human Organ Systems)</u></p> <ul style="list-style-type: none"> <li>♦ describe the components of the body's system of defense against infections</li> <li>♦ explain how the health of humans is affected by environmental factors (e.g., the affect of polluted water on drinking water in making people sick)</li> </ul>	Outside
<b>"AQ" THE AMAZING AQUIFER</b>	WP	<p>Students will be encouraged to investigate the source of groundwater, how it gets there and how it is extracted for our use. Find out how pollutants affect our groundwater and how pollution can be prevented.</p>	<p><u>Earth and Space Systems, <b>Grade 3</b> (Soils in the Environment)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of the similarities and differences between various soils and the effects of moving water on soils</li> <li>♦ investigate the components of various soils, and describe the effects of moving water on these soils</li> <li>♦ compare the absorption of water by different earth materials</li> </ul> <p><u>Earth and Space Systems, <b>Grade 4</b> ((Rocks, Minerals and Erosion)</u></p> <ul style="list-style-type: none"> <li>♦ describe the effects of human activity (e.g., land development, building of dams, mine development, erosion-preventing measures) on physical features of the landscape, and examine the use of rocks and minerals in making consumer products</li> <li>♦ determine the positive and negative effects of human activity on the landscape (e.g., use of farm land for housing developments; use of wilderness areas for cultivation of crops; creation of parks)</li> </ul>	Curling Club

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>BACK YARD BUDDIES</b>	WP	Using a hands-on model of a residential area, students will discover how we can affect the groundwater and surface water in our environment through non-environmentally friendly practices in our own backyards. Students also learn the problems of contamination, how to prevent pollution problems in our own backyards and more environmentally friendly practices to help keep our water supplies safe from contamination.	<p><u>Earth and Space Systems, <b>Grade 4</b> (Rocks, Minerals and Erosion)</u></p> <ul style="list-style-type: none"> <li>♦ describe the effects of human activity (e.g., land development, building of dams, mine development, erosion-preventing measures) on physical features of the landscape, and examine the use of rocks and minerals in making consumer products</li> <li>♦ determine the positive and negative effects of human activity on the landscape (e.g., use of farm land for housing developments; use of wilderness areas for cultivation of crops; creation of parks)</li> </ul> <p><u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them</li> <li>♦ show the affects on plants and animals of the loss of their natural habitat</li> <li>♦ describe ways in which humans are</li> <li>♦ dependent on plants and animals</li> <li>♦ describe ways in which humans can affect the natural world (e.g., urban development threatens water courses, but conservation areas can be established to protect specific habitats)</li> </ul>	Tent C
<b>BOOTS, BUBBLES &amp; BUGS</b>	WS	Students discover the differences between aquatic insects found in stream and pond habitats with emphasis on adaptations to their environment. Through the use of an interactive puppet show, participants follow Billy Water Boatman and a little girl named Polly as they wish for a better life underwater. Our characters meet a number of interesting creatures such as grasshoppers, damselfly nymphs, black fly larva, mayfly nymphs, water striders and whirligig beetles along their way learning that sometimes it is better not to get what you wish for!	<p><u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them (e.g., organisms live in marshes because they need the food, water and shelter provided there)</li> <li>♦ describe ways in which humans are dependent on plants and animals</li> <li>♦ describe ways in which humans can affect the natural world (e.g., urban development threatens water courses [some species die or go elsewhere while other species to multiply too rapidly], but conservation areas can be established to protect specific habitats)</li> <li>♦ classify organisms according to their role in a food chain</li> </ul>	Outside

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>BUCKET BRIGADE</b>	WA	Students work together to simulate medieval & pioneer life, including firefighting methods. They also have the opportunity to talk to local firefighters and see modern firefighting technology such as fire trucks and fire hoses. Students line up and pass buckets full of water to put out a “fire”.	<p><u>Heritage and Citizenship, Grade 4 (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>compare a medieval community with their own community (in relation to emergency services)</li> </ul> <p><u>Measurement, Grade 4 (Capacity, Volume and Mass)</u></p> <ul style="list-style-type: none"> <li>demonstrate an understanding of and an ability to apply appropriate metric prefixes in measurement and estimation activities</li> <li>solve problems related to their day to day environment using measurement and estimation</li> </ul> <p><u>Fundamental Movement Skills, Grade 4 (Locomotion and Travelling)</u></p> <p>combine locomotion/ raveling skills in repeatable sequences, incorporating a variety of speeds, levels and energy resources</p>	Outside
<b>CAN YOU MANAGE?</b>	WP	Nutrient management is in the headlines all over Grey and Bruce Counties lately. Participants get a chance to learn what it is all about and how we can ensure safe water supplies for all our needs through hands-on activities using working models of agricultural areas.	<p><u>Life Systems, Grade 4 (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>describe ways in which humans can affect the natural world</li> </ul> <p>describe ways in which humans are dependent on plants and animals</p> <p><u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u></p> <ul style="list-style-type: none"> <li>formulate questions about and identify needs and problems related to objects and events in the environment, and explore possible answers and solutions</li> </ul> <p>distinguish between the natural features of the landscape and those that are the result of human activity</p> <p>determine positive and negative effects of human alteration of the landscape</p> <p><u>Measurement, Grade 4 (Capacity, Volume and Mass)</u></p> <ul style="list-style-type: none"> <li>select the most appropriate standard unit to measure the capacity of containers</li> </ul>	Tent B

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>DOWN AND OUT IN THE COUNTRY</b>	WS	A sub-surface look at how sewage is treated in rural areas. Using a model of a septic system, students observe what happens to the solid and liquid waste and how it is cleaned as it travels through the soil material. Malfunctioning systems and their effects on the environment are also demonstrated.	<p><u>Energy and Control, Grade 3 (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>◆ identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> <li>◆ recognize devices that are controlled automatically (e.g. timers, washing machines), at a distance (e.g. a remote-control toy), or by hand (e.g. the flushing mechanism on a toilet)</li> </ul> <p><u>Heritage and Citizenship, Grade 4 (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>◆ compare a medieval community with their own community (with respect to rural and urban sewage treatment)</li> </ul> <p><u>Earth and Space Systems, Grade 3 (Soils in the Environment)</u></p> <ul style="list-style-type: none"> <li>◆ demonstrate an understanding of the similarities and differences between various soils and the effects of moving water on soils</li> <li>◆ investigate the components of various soils, and describe the effects of moving water on these soils</li> <li>◆ compare the absorption of water by different earth materials</li> </ul> <p><u>Earth and Space Systems, Grade 4 ((Rocks, Minerals &amp; Erosion)</u></p> <ul style="list-style-type: none"> <li>◆ describe the effects of human activity (e.g., land development, building of dams, mine development, erosion-preventing measures) on physical features of the landscape, and examine the use of rocks and minerals in making consumer products</li> <li>◆ determine the positive and negative effects of human activity on the landscape (e.g., use of farm land for housing developments; use of wilderness areas for cultivation of crops; creation of parks)</li> </ul>	Curling Rink
<b>DRIPIAL PURSUIT</b>	WA	Teams of students engage in a friendly game of not so “trivial” water facts.	<ul style="list-style-type: none"> <li>◆ Variety of expectations addressed.</li> </ul>	Outside

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<b>DROP ZONE</b>	WT	Students discover water towers not only store the water we need for our homes, schools and businesses but also provide the pressure necessary to get that water to us. Participants actively get involved in learning that the tower's size, shape and height will help determine what amount of pressure is available. Look out for the drop zone!	<u>Structures and Mechanisms <b>Grade 4</b> (Pulleys and Gears)</u> <ul style="list-style-type: none"> <li>♦ formulate questions about and identify needs and problems related to structures and mechanisms in their environment, and explore possible answers and solutions;</li> <li>♦ plan investigations for some of these answers and solutions, identifying variables that need to be held constant to ensure a fair test and identifying criteria for assessing solutions;</li> </ul>	Outside
<b>EGGS TO ADULTS</b>	WS	Students observe fish in two different stages of their life cycle. Through a brief discussion, they will learn about the different stages of a fish's life cycle and why habitat protection and clean water are important for each of these stages. Students will also learn how fish fit into the food web/chain and local ecosystem. Students will be encouraged to describe ways in which humans can both threaten and protect the natural habitat of fish.	<u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u> <ul style="list-style-type: none"> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them</li> <li>♦ describe ways in which humans can change habitats and the effects of these changes on the plants and animals within the habitats</li> <li>♦ identify, through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, light; ground features, weather conditions, <b>groundwater</b>)</li> <li>♦ describe ways in which humans can affect the natural world(e.g., urban development forces some species to go elsewhere and enables other species to multiply too rapidly; conservation areas can be established to protect specific habitats)</li> </ul>	Curling Rink

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>ENVIROSCAPE HAZARDOUS WASTE</b>	WP	Using a hands-on model of an industrial area, students will discover what hazardous substances are, where they come from and their effects on the environment. Students also learn the problems of hazardous waste contamination, how to clean up and prevent hazardous wastes from adversely affecting the environment.	<p><u>Life Systems, Grade 4 (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them</li> <li>♦ show the affects on plants and animals of the loss of their natural habitat</li> <li>♦ describe ways in which humans are</li> <li>♦ dependent on plants and animals</li> <li>♦ describe ways in which humans can affect the natural world (e.g., urban development, pollution &amp; how conservation can help)</li> </ul> <p><u>Heritage and Citizenship, Grade 4 (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>♦ compare environmental causes of pollution in Medieval times and today</li> </ul> <p><u>Life Systems, Grade 5 (Human Organ Systems)</u></p> <p>describe the components of the body’s system of defense against infections</p> <ul style="list-style-type: none"> <li>♦ explain how the health of humans is affected by environmental factors (e.g., the affect of polluted water on drinking water in making people sick)</li> </ul>	Tent B
<b>EROSION BUSTERS</b>	WP	Participants build their own watershed using soil and materials supplied, then pour water over model to discover soil erosion problems. Participants are then given tools to help “fix” erosion problems. The importance of cover, wetlands and streambank protection is emphasized.	<p><u>Life Systems, Grade 4 (Habitats and Communities)</u></p> <p>describe ways in which humans can affect the natural world</p> <p>describe ways in which humans are dependent on plants and animals</p> <p><u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u></p> <p>describe the effects of wind, water and ice on the landscape</p> <p>formulate questions about and identify needs and problems related to objects and events in the environment, and explore possible answers and solutions</p> <p>distinguish between the natural features of the landscape and those that are the result of human activity</p> <p>determine positive and negative effects of human alteration of the landscape</p> <p>identify ways in which soil erosion can be controlled or minimized</p> <p>design, build and test a system to control the effects of soil erosion</p> <p><u>Measurement, Grade 4 (Capacity, Volume and Mass)</u></p> <p>select the most appropriate standard unit to measure the capacity of containers</p>	Tent B

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>GO WITH THE FLOW</b>	WC	How can we save water in the kitchen? Students observe the effect of an aerator on our kitchen taps by scrubbing potatoes and comparing how much water was used both with and without and aerator. They also observe different methods that can be used to conserve water.	<p><u>Energy and Control, Grade 3 (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> </ul> <p><u>Measurement, Grade 4 (Capacity, Volume and Mass)</u></p> <ul style="list-style-type: none"> <li>solve problems related to their day to day environment using measurement and estimation</li> </ul> <p><u>Energy and Control, Grade 5 (Conservation of Energy)</u></p> <ul style="list-style-type: none"> <li>demonstrate an understanding of the importance of energy in relation to the wise use of renewable and non-renewable energy resources.</li> <li>evaluate the reasons for conserving natural resources and identify possible ways of conserving energy.</li> </ul>	Tent A
<b>GREAT WATER RACE</b>	WS	Students continue their study of porosity and permeability by watching how quickly water passes through sand, gravel and fractured limestone. Students are introduced to the concepts of slope and angle and observe their effect on how water moves through the Earth.	<p><u>Earth and Space Systems, Grade 3 (Soils in the Environment)</u></p> <p>demonstrate an understanding of the similarities and differences between various soils and the effects of moving water on soils</p> <p>investigate the components of various soils, and describe the effects of moving water on these soils</p> <p>compare the absorption of water by different earth materials, and describe the effects of moisture on characteristics of the materials (e.g. on texture, coherence, ability to hold a shape)</p> <p><u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u></p> <p>describe the effects of wind, water, and ice on the landscape (e.g., ice breaking rocks into soil), and identify natural phenomena that cause rapid and significant changes in the landscape (e.g., floods, tornadoes, heavy rainstorms)</p> <ul style="list-style-type: none"> <li>distinguish between natural features of the landscape and those that are the result of human activity (e.g., Niagara Escarpment, farm land, vineyards)</li> </ul> <p>determine positive and negative effects of human alteration of the landscape (e.g., use of farm land for housing developments; use of wilderness areas for cultivation of crops; creation of parks)</p> <p>describe the effects of human activity (e.g. land development, building of dams, mining, erosion prevention)</p> <ul style="list-style-type: none"> <li>identify ways in which soil erosion can be controlled or minimized (planting vegetation)</li> </ul>	Tent B

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>HEALTHY STREAMS... HAPPY PEOPLE</b>	WA	Students will review the food chain in a stream ecosystem. Using a “gravity puzzle”, students will learn that all the organisms in the stream are connected and that humans are part of the chain. Ultimately, humans can have both a positive and negative influence on streams, so if the streams stay healthy, so will humans.	<p><u>Life Systems, Grade 4 (Habitats and Communities)</u>  demonstrate an understanding of a food chain as a system in which energy from the sun is transferred eventually to animals, construct food chains of different plant and animal species (e.g., sun - aquatic plants - plankton - minnow - trout - fisher), and classify animals as omnivore, carnivore, and herbivore  identify and classify organisms according to their role in a food chain (e.g., producer, consumer)  identify, through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, shelter, light, ground features)  describe ways in which humans can change habitats and the effects of these changes on the plants and animals within</p>	Tent C
<b>H 2 OHOOHH..... THE SCIENCE OF WATER!</b>	WS	Students discover the science of water – buoyancy, density, surface tension and more! Hands-on experiments with water will have your budding scientists learning about the properties of water and putting the ohhhh! in H2O!	<p><u>Energy and Control, Grade 3 (Forces and Movement)</u>  <ul style="list-style-type: none"> <li>◆ Identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> </ul> <u>Measurement, Grade 4 (Capacity, Volume and Mass)</u>  <ul style="list-style-type: none"> <li>◆ Solve problems related to their day to day environment using measurement and estimation</li> <li>◆ Demonstrate an understanding of and an ability to apply appropriate metric prefixes in measurement and estimation activities</li> <li>◆ Select the most appropriate standard unit to measure the capacity of containers</li> </ul> <u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u>  <ul style="list-style-type: none"> <li>◆ Describe the effects of wind, water and ice on the landscape</li> <li>◆ Formulate questions about and identify needs and problems related to objects and events in the environment, and explore possible answers and solutions</li> <li>◆ Determine the positive and negative affects of human activity</li> </ul> <u>Life Systems, Grade 4 (Habitats and Communities)</u>  <ul style="list-style-type: none"> <li>◆ Identify through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, light, ground features, weather)</li> <li>◆ Describe ways in which humans can affect the natural world</li> </ul> </p>	Curling Club

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>LATHER UP</b>	WC	<p>How much water do we use for a 5 minute shower? What if we didn't have showers or even piped water? Students compare early medieval &amp; pioneer bathing methods to modern methods. How do we take water for granted now that we have it readily available in our homes? What would medieval/pioneer children think of our running water? What can we do to save water when having a shower? Students enter a model shower to see the difference when a simple technological water-saving device is employed.</p>	<p><u>Energy and Control, <b>Grade 3</b> (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>♦ identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> </ul> <p><u>Measurement, <b>Grade 4</b> (Capacity, Volume and Mass)</u></p> <ul style="list-style-type: none"> <li>♦ solve problems related to their day to day environment using measurement and estimation</li> </ul> <p><u>Number Sense and Numeration, <b>Grade 4</b> (Computation)</u></p> <ul style="list-style-type: none"> <li>♦ select and perform computation techniques appropriate to specific problems involving whole numbers and decimals, and determine whether the results are reasonable</li> </ul> <p><u>Energy and Control, <b>Grade 5</b> (Conservation of Energy)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of the importance of energy in relation to the wise use of renewable and non-renewable energy resources.</li> <li>♦ evaluate the reasons for conserving natural resources and identify possible ways of conserving energy</li> </ul>	Tent A
<b>MARSH MONSTERS</b>	WS	<p>Participants use nets and equipment to discover what lives in the waters of the Saugeen River. A Biologist and volunteers assist in reviewing the food chain and interdependency.</p>	<p><u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them (e.g., organisms live in marshes because they need the food, water and shelter provided there)</li> <li>♦ describe ways in which humans are dependent on plants and animals</li> <li>♦ describe ways in which humans can affect the natural world (e.g., urban development threatens water courses [some species die or go elsewhere while other species multiply too rapidly], but conservation areas can be established to protect specific habitats)</li> <li>♦ classify organisms according to their role in a food chain</li> </ul>	Outside

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>OFF I GO!</b>	WA	<p>In Southern Ontario we have many nearby sources of water. In many countries people must travel far distances to obtain clean water. Students participate in a relay obstacle course to simulate the act of carrying water over difficult terrain and long distances. Likewise, water travels long distances through pipes to get to our homes. They will be encouraged to imagine what it would be like if we did not have water piped into our homes?</p>	<p><u>Number Sense and Numeration, <b>Grade 4 (Computation)</b></u></p> <ul style="list-style-type: none"> <li>◆ select and perform computation techniques appropriate to specific problems involving whole numbers and decimals, and determine whether the results are reasonable</li> <li>◆ solve problems involving whole numbers and decimals, and describe and explain the variety of strategies used</li> </ul> <p><u>Fundamental Movement Skills, <b>Grade 4 (Locomotion and Travelling)</b></u></p> <ul style="list-style-type: none"> <li>◆ combine locomotion/travelling skills in repeatable sequences, incorporating a variety of speeds, levels &amp; energy resources</li> </ul> <p><u>Heritage and Citizenship, <b>Grade 4 (Medieval Times)</b></u></p> <ul style="list-style-type: none"> <li>◆ compare a medieval community with their own community (with respect to the sources &amp; transportation of water resources)</li> </ul>	Outside
<b>OIL SLICK!</b>	WP	<p>What happens when oil is spilled in a natural habitat? Students have a brief discussion of this phenomenon in the context of a large scale (as in oil tanker spill at sea) and on a smaller scale (such as when oil travels through storm drains into our local lakes and rivers). Students use a model to see how real oil and water mix (or don't) and how the animal's habitats, including vegetation, are adversely affected. An actual technique of cleaning up the oil is demonstrated. Students also take the role of wildlife biologists observing feathers when they are wet, dry or soaked in oil; giving oral descriptions of their observations. Then they attempt to actually clean the feathers. Students are encouraged to think about actions such as pouring used oil and other contaminants down storm drains or household drains and how these cause pollution and discuss why prevention is a better strategy than remediation.</p>	<p><u>Life Systems, <b>Grade 4 (Habitats and Communities)</b></u></p> <ul style="list-style-type: none"> <li>◆ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them</li> <li>◆ describe ways in which humans can change habitats and the effects of these changes on the plants and animals within the habitats (e.g., urban development &amp; accidents) [conservation areas can be established to protect specific habitats]</li> <li>◆ identify, through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, light; ground features, weather)</li> <li>◆ describe the effects of habitat loss [or damage] (e.g. some species to go elsewhere, other species multiply too rapidly, others do not reproduce successfully and others die)</li> </ul>	Outside

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>PIONEER WATER RACE</b>	WA	How did pioneers collect all of the water that they needed for their daily lives? Students participate in a race using buckets of water and pose questions and make observations to gain an understanding of the difference between Canadian communities in the early 1800s and modern life in their community. How did people function differently without our technology?	<p><u>Heritage and Citizenship, Grade 4 (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>♦ compare a medieval community with their own community</li> </ul> <p><u>Number Sense and Numeration, Grade 4 (Computation)</u></p> <ul style="list-style-type: none"> <li>♦ select and perform computation techniques appropriate to specific problems involving whole numbers and decimals,</li> <li>♦ and determine whether the results are reasonable</li> <li>♦ solve problems involving whole numbers and decimals, and describe and explain the variety of strategies use</li> </ul> <p><u>Fundamental Movement Skills, Grade 4 (Locomotion and Travelling)</u></p> <ul style="list-style-type: none"> <li>♦ combine locomotion/ raveling skills in repeatable sequences, incorporating a variety of speeds, levels &amp; energy resources</li> </ul>	Outside
<b>POROSITY &amp; PERMEABILITY</b>	WS	Porosity and permeability are the key factors in determining how water moves through or is held by the earth's surface materials. Using models to determine grain size and real soil samples for testing, discover one of the mysteries of how the water cycle serves us. Students engage in an activity which demonstrates these principles.	<p><u>Earth and Space Systems, Grade 3 (Soils in the Environment)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of the similarities and differences between various soils and the effects of moving water on soils</li> <li>♦ investigate the components of various soils, and describe the effects of moving water on these soils</li> <li>♦ compare the absorption of water by different earth materials, and describe the effects of moisture on characteristics of the materials (e.g. On texture, coherence, ability to hold a shape)</li> </ul> <p><u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u></p> <ul style="list-style-type: none"> <li>♦ describe the effects of wind, water, and ice on the landscape (e.g., ice breaking rocks into soil), and identify natural phenomena that cause rapid and significant changes in the landscape (e.g., floods, tornadoes, heavy rainstorms)</li> <li>♦ distinguish between natural features of the landscape and those that are the result of human activity (e.g., Niagara Escarpment, farm land, vineyards)</li> <li>♦ determine positive and negative effects of human alteration of the landscape (e.g., use of farm land for housing developments; use of wilderness areas for cultivation of crops; creation of parks)</li> <li>♦ describe the effects of human activity (e.g. land development, building of dams, mining, erosion prevention)</li> <li>♦ identify ways in which soil erosion can be controlled or minimized (planting vegetation)</li> </ul>	Curling Rink

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>ROLLING THROUGH THE SHED</b>	WP	Students pretend to be drops of rain which, through precipitation, enter into the watershed. They roll through the watershed to see how water can be contaminated.	<p><u>Canada and World Connections <b>Grade 4</b> (Provinces and Territories of Canada)</u></p> <ul style="list-style-type: none"> <li>♦ identify and describe the main features of a river system (e.g. mouth, source, tributaries etc. relating them to local examples and using these to illustrate a watershed)</li> </ul> <p><u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them</li> <li>♦ describe ways in which humans can change habitats and the effects of these changes on the plants and animals within the habitats (e.g., industrial development &amp; accidents)</li> <li>♦ identify, through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, light; ground features, weather)</li> <li>♦ describe the effects of habitat loss [or damage] (e.g. some species to go elsewhere, other species multiply too rapidly, others do not reproduce successfully and others die)</li> </ul>	Curling Rink
<b>ROYAL FLUSH</b>	WC	How does a toilet work? Students examine how the mechanism in an ordinary household device works and the difference between water-saver toilets and regular-flow toilets.	<p><u>Energy and Control, <b>Grade 3</b> (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>♦ -identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us.</li> </ul> <p><u>Heritage and Citizenship, <b>Grade 4</b> (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>♦ compare a medieval community with their own community (e.g., with respect to housing...)</li> </ul> <p><u>Measurement, <b>Grade 4</b> (Capacity, Volume and Mass)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of and an ability to apply appropriate metric prefixes in measurement and estimation activities</li> </ul> <p><u>Energy and Control, <b>Grade 5</b> (Conservation of Energy)</u></p> <ul style="list-style-type: none"> <li>♦ evaluate the reasons for conserving natural resources and identify possible ways of conserving energy.</li> </ul>	Tent A

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>RUNOFF OR RECHARGE?</b>	WP	Using a model, students investigate the importance of vegetation in helping to fight against water erosion. Students compare how concrete, gravel, bare earth, and vegetation surfaces affect runoff and infiltration.	<p><u>Earth and Space Systems, <b>Grade 3</b> (Soils in the Environment)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of the similarities and differences between various soils and the effects of moving water on soils</li> <li>♦ investigate the components of various soils, and describe the effects of moving water on these soils</li> <li>♦ compare the absorption of water by different earth materials, and describe the effects of moisture on characteristics of the materials (e.g. on texture, coherence, ability to hold a shape)</li> </ul> <p><u>Earth and Space Systems, <b>Grade 4</b> (Rocks, Minerals and Erosion)</u></p> <ul style="list-style-type: none"> <li>♦ describe the effects of wind, water, and ice on the landscape (e.g., ice breaking rocks into soil), and identify natural phenomena that cause rapid and significant changes in the landscape (e.g., floods, tornadoes, heavy rainstorms)</li> <li>♦ distinguish between natural features of the landscape and those that are the result of human activity (e.g., Niagara Escarpment, farm land, vineyards)</li> <li>♦ determine positive and negative effects of human alteration of the landscape (e.g., use of farm land for housing developments; use of wilderness areas for cultivation of crops; creation of parks)</li> <li>♦ describe the effects of human activity (e.g. land development, building of dams, mining, erosion prevention)</li> <li>♦ identify ways in which soil erosion can be controlled or minimized (planting vegetation)</li> </ul>	Tent B

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>SAVE OUR WETLANDS</b>	WP	Students will investigate the importance of wetlands in storing water as part of the hydrologic cycle. By using a student built model, originally designed as a Science Fair project, students will see the results of failing to conserve or manage wetland areas. Wetlands help to retain extra water during high flow periods (snowmelt and significant rainstorm water) and augment river flow throughout the year. Even the reduction in size of an average wetland can greatly affect the river and the people who live downstream as witnessed by students when the wetland is “dredged” and a “rainstorm” comes along.	<p><u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ describe ways in which humans can affect the natural world (e.g. landscaping, and how it affects watercourses and groundwater supplies by endangering the lives of living things, and how conservation areas can be established to protect specific habitats)</li> </ul> <p><u>Earth and Space Systems, <b>Grade 4</b> (Rocks, Minerals &amp; Erosion)</u></p> <ul style="list-style-type: none"> <li>♦ formulate questions about and identify needs and problems related to objects and events in the environment, and explore possible answers and solutions</li> <li>♦ distinguish between the natural features of the landscape and those that are the result of human activity</li> <li>♦ determine positive and negative effects of human alteration of the landscape</li> </ul>	Tent C
<b>SEPTIC SIGHTS</b>	WS	Students observe the water trickle through sewage pipes into the septic bed in a full size model of a septic system. Where does the waste water and solid waste go?	<p><u>Energy and Control, <b>Grade 3</b> (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>♦ identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> <li>♦ recognize devices that are controlled automatically (e.g. timers, washing machines), at a distance(e.g. a remote-control toy), or by hand (e.g. the flushing mechanism on a toilet)</li> </ul> <p><u>Heritage and Citizenship, <b>Grade 4</b> (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>♦ compare a medieval community with their own community (with respect to rural and urban sewage treatment!!)</li> </ul>	Outside

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>SIMPLY DIVINE</b>	WT	Meet our “Dowser”, also known as a “Water Witch”. What would 18 <sup>th</sup> and 19 <sup>th</sup> century settlers do if they were not living near a river or lake? How would they be able to find water below the surface of the ground? Students will see if they can successfully dowse for water. How do we find today?	<u>Heritage and Citizenship, Grade 3 (Pioneer Life)</u> <ul style="list-style-type: none"> <li>♦ collect and evaluate information about human and environmental interactions during the early settlement period</li> <li>♦ compare and contrast life in a pioneer settlement with that in their own community (with respect to services, jobs schools, stores, use of natural resources)</li> </ul> <u>Heritage and Citizenship, Grade 4 (Medieval Times)</u> <ul style="list-style-type: none"> <li>♦ compare a medieval community with their own community (with respect to services, jobs... and acquisition of natural resources)</li> </ul>	Outside
<b>SOMETHING FISHY’S GOIN’ ON</b>	WS	Students test the pH levels of various common liquids (ex: juice, vinegar). There is a brief discussion of pH and how natural habitats must have water of a certain pH in order to support plant and animal life. Students use model lakes to see which lakes are healthy and which are too acidic, due to acid precipitation.	<u>Life Systems, Grade 4 (Habitats and Communities)</u> <ul style="list-style-type: none"> <li>♦ identify, through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, shelter, light, ground features, weather conditions...)</li> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them (e.g., ducks live in marshes because they need marsh plants for food and shelter and water for movement)</li> <li>♦ show the effects on plants and animals of the loss of their natural habitat (e.g. high acidity kills species of plants and animals and can prevent the remaining ones from reproducing successfully)</li> </ul>	Tent B
<b>TREATING TRASH</b>	WP	How does a modern landfill operate? Students explore for themselves how we treat our trash today and compare this to the unsafe practices that were done in the past. A landfill model provides a breakdown of the different stages of the treatment process and demonstrates the effect on the groundwater if our trash is not disposed of properly.	<u>Life Systems, Grade 4 (Habitats and Communities)</u> <ul style="list-style-type: none"> <li>♦ describe ways in which humans can affect the natural world (e.g. pollution, and how it affects watercourses and groundwater supplies by endangering the lives of living things)</li> </ul> <u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u> <ul style="list-style-type: none"> <li>♦ formulate questions about and identify needs and problems related to objects and events in the environment, and explore possible answers and solutions</li> <li>♦ distinguish between the natural features of the landscape and those that are the result of human activity</li> <li>♦ determine positive and negative effects of human alteration of the landscape</li> </ul>	Tent C

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>WATER CYCLE MADNESS</b>	WS	<p>Students learn about the water cycle first hand by watching it cycle before their eyes. Unique working model shows the processes of evaporation, transpiration, condensation, precipitation, and runoff all with the help of a miniature sun (lamp) and other materials. Learn how the water cycle impacts our daily lives.</p>	<p><u>Earth and Space Systems, <b>Grade 3</b> (Soils in the Environment)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of the similarities and differences between various soils and the effects of moving water on soils</li> <li>♦ investigate the components of various soils, and describe the effects of moving water on these soils</li> </ul> <p>compare the absorption of water by different earth materials, and describe the effects of moisture on characteristics of the materials (e.g. on texture, coherence, ability to hold a shape)</p> <p><u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>♦ identify, through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, light; ground features, severe weather)</li> <li>♦ describe the effects of habitat loss [or damage] (e.g. some species to go elsewhere, other species multiply too rapidly, others do not reproduce successfully and others die)</li> </ul> <p><u>Earth and Space Systems, <b>Grade 5</b> (Weather)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of major climate factors and patterns associated with weather</li> <li>♦ investigate the major climate factors associated with weather, and design, construct, and test a variety of instruments for recording various features of weather</li> <li>♦ examine how weather forecasts influence decisions concerning human activity and how humans have adapted to a variety of weather conditions</li> </ul>	Curling Rink

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<p><b>WATER – GO - ROUND</b></p>	<p>WT</p>	<p>Students are led through a variety of experiments using an enviroscape model to demonstrate how water is used and recycled in our communities. Demonstrations and discussion include water treatment, distribution, wastewater collection, wastewater treatment and biosolids disposal/use. This activity ties in well with a number of other activities at the festival.</p>	<p><u>Energy and Control, Grade 3 (Forces and Movement)</u></p> <ul style="list-style-type: none"> <li>◆ Identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> </ul> <p><u>Heritage and Citizenship, Grade 4 (Medieval Times)</u></p> <ul style="list-style-type: none"> <li>◆ Compare a medieval community with their own community (e.g., with respect to water availability and treatment)</li> <li>◆ Compare environmental causes of pollution in Medieval times and today</li> </ul> <p><u>Life Systems, Grade 4 (Habitats and Communities)</u></p> <ul style="list-style-type: none"> <li>◆ Identify through observation, various factors that affect plants and animals in a specific habitat (e.g., availability of water, food sources, light; ground features, weather)</li> <li>◆ Describe ways in which humans can affect the natural world</li> <li>◆ Describe ways in which humans can change habitats and the effects of these changes on the plants and animals within</li> </ul> <p><u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u></p> <ul style="list-style-type: none"> <li>◆ Distinguish between the natural features of the landscape and those that are the result of human activity</li> <li>◆ Determine the positive and negative effects of human alteration of the landscape</li> <li>◆ Describe the effects of human activity</li> </ul> <p><u>Canada and World Connections, Grade 4 (Provinces and Territories of Canada)</u></p> <ul style="list-style-type: none"> <li>◆ Identify and describe the main features of a river system (e.g., mouth, source, tributaries etc. relating them to local examples and using these to illustrate a watershed)</li> </ul> <p><u>Life Systems, Grade 5 (Human Organ Systems)</u></p> <ul style="list-style-type: none"> <li>◆ Describe the components of the body’s system of defense against infections</li> <li>◆ Explain how the health of humans is affected by environmental factors (e.g., the affect of polluted water on drinking water in making people sick)</li> </ul>	<p>Tent C</p>

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>WATER HOGS MAKE SMOG</b>	WA	This hands-on activity shows students the connections in how using water can create air pollution. Students learn through pumping water from a “lake” model, the process of getting water to your house. Each step of the process from cleaning, heating, and treating waste water creates air pollution. Acid rain created from air pollution makes water an unsuitable habitat for animals and plants to survive.	<u>Social Studies, <b>Grade 4</b> (Provinces &amp; Territories)</u> <ul style="list-style-type: none"> <li>◆ sort and classify information to identify issues, solve problems and make decisions</li> <li>◆ demonstrate an understanding of the significance of the St. Lawrence River and the Great Lakes systems (e.g., for transportation, industry, recreation)</li> <li>◆ identify Ontario’s major natural resources and their uses (e.g., water for hydroelectricity and recreation)</li> <li>◆ locate key information about natural resources and their uses (e.g., within the regions of Ontario and Canada) from primary sources</li> <li>◆ construct and read a wide variety of graphs, charts, diagrams, maps, and models for specific purposes</li> </ul>	Curling Rink
<b>WATER MAIN BREAK!</b>	WT	Students will have the opportunity to see how groundwater is pumped from the aquifer to a reservoir, treated (chlorinated) and piped through a distribution system to be delivered to homes and businesses in the community. This will emulate the systems currently in use in many communities that have municipal water systems in place.	<u>Energy and Control, <b>Grade 3</b> (Forces and Movement)</u> <ul style="list-style-type: none"> <li>◆ identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> </ul> <u>Heritage and Citizenship, <b>Grade 4</b> (Medieval Times)</u> <p>compare a medieval community with their own community (e.g., with respect to water availability and treatment)</p> <u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u> <p>identify and classify organisms according to their role in a food chain (e.g., producer, consumer)</p> <p>describe ways in which humans can affect the natural world</p> <u>Life Systems, <b>Grade 5</b> (Human Organ Systems)</u> <ul style="list-style-type: none"> <li>◆ describe the components of the body’s system of defense against infections</li> <li>◆ explain how the health of humans is affected by environmental factors (e.g., the affect of polluted water on drinking water in making people sick)</li> </ul>	Outside
<b>WATER MAKES IT</b>	WC	Students participate in a game similar to something on the “Price is Right” to determine how much water is used to produce different items. We all know all living things need water to survive, but also to manufacture many things, water is required.	<u>Life Systems, <b>Grade 4</b> (Habitats and Communities)</u> <ul style="list-style-type: none"> <li>◆ describe ways in which humans affect the natural world (e.g. pollution, and how it affects watercourses and groundwater supplies by endangering the lives of living things)</li> <li>◆ identify, through observation, various factors that affect plants and animals in a specific habitat (e.g. availability of water, food sources, light; ground features, severe weather)</li> </ul> <u>Earth and Space Systems, <b>Grade 4</b> (Rocks, Minerals and Erosion)</u> <ul style="list-style-type: none"> <li>◆ formulate questions about and identify needs and problems related to objects and events in the environment, and explore possible answers and solutions</li> <li>◆ distinguish between the natural features of the landscape and those that are the result of human activity</li> <li>◆ determine the positive and negative affects of human activity</li> </ul>	Curling Rink

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>WATER VITAL TO HEALTH</b>	WS	How is water used in our body? Students will engage in an interactive activity to discover the necessity of water to our body's organs and life systems.	<u>Life Systems, Grade 4 (Habitats and Communities)</u> <ul style="list-style-type: none"> <li>♦ recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them (e.g., organisms live in marshes because they need the food, water and shelter provided there)</li> <li>♦ describe ways in which humans are dependent on plants and animals (e.g., wetlands filter water and help keep surface water clean)</li> </ul> <u>Life Systems Grade 5 (Human Organ Systems)</u> <ul style="list-style-type: none"> <li>♦ describe the basic structure and function of the major organs</li> <li>♦ demonstrate understanding of factors that contribute to good health</li> <li>♦ identify the skin as an organ and explain its purpose</li> <li>♦ explain how the health of human beings is affected by environmental factors (e.g. polluted water)</li> </ul>	Curling Rink
<b>WELL DRILL IT</b>	WT	Students discover the importance of the water table as it exists underground, investigating how we access the water from aquifers. How do we get the water out of the ground once we've located an aquifer? Students "drill" their own wells, pump out water in models as well as use a hand pump to discover the work involved in getting water from underground. A model of a modern drilled well helps students to visualize the layers of different materials underfoot.	<u>Earth &amp; Space Systems, Grade 3 (Soils in the Environment)</u> <ul style="list-style-type: none"> <li>♦ describe, using their observations, the various components within a sample of soil)</li> </ul> <u>Heritage and Citizenship, Grade 4 (Medieval Times)</u> <ul style="list-style-type: none"> <li>♦ compare a medieval community with their own community</li> </ul>	Tent B
<b>WELL SEALED</b>	WP	Wells sometimes dry up or are just not used any longer, but when you leave them unprotected our groundwater is at risk!	<u>Earth and Space Systems, Grade 4 (Rocks, Minerals and Erosion)</u> <ul style="list-style-type: none"> <li>♦ describe the effects of human activity (e.g., land development, building of dams, mine development, erosion-preventing measures) on physical features of the landscape, and examine the use of rocks and minerals in making consumer products</li> <li>♦ determine the positive and negative effects of human activity on the landscape (e.g., use of farm land for housing developments; use of wilderness areas for cultivation of crops; creation of parks)</li> </ul>	Tent C

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>WE USE THAT MUCH?</b>	WC	Students use an interactive activity to discover how much water is used in every day activities in relation to a known reference (2L pop bottles). Water conservation from various sources can also be examined.	<u>Energy and Control, Grade 3 (Forces and Movement)</u> <ul style="list-style-type: none"> <li>♦ identify objects, devices and systems in everyday life that are affected by forces and movement and explain in what ways they are useful to us</li> </ul> <u>Measurement, Grade 4 (Capacity, Volume and Mass)</u> <ul style="list-style-type: none"> <li>♦ solve problems related to their day to day environment using measurement and estimation</li> </ul>	Curling Rink
<b>WHAT IS A WATERSHED?</b>	WC	Using a large 3D model complete with water, streams and tributaries, students investigate what makes up the major watersheds in our area. Students will learn about the main features of a river system (e.g. mouth, source, wetlands, tributary, river, stream, delta, etc.). Erosion and deposition will also be explored. Students will also be encouraged to locate their school's community on watershed maps.	<u>Canada and World Connections, Grade 4 (The Provinces and Territories of Canada)</u> <ul style="list-style-type: none"> <li>♦ identify and describe the main features of a river system (e.g. mouth, source, tributary, branch, delta, flow).</li> <li>♦ utilize special purpose maps (e.g. contour, climatic, physical feature maps)</li> </ul> <u>Earth and Space Systems, Grade 4 (Rocks, Minerals, and Erosion)</u> <ul style="list-style-type: none"> <li>♦ describe the effects of wind, water, and ice on the landscape (e.g., ice breaking rocks in to soil), and identify natural phenomena that cause rapid and significant changes in the landscape (e.g., floods, tornadoes, heavy rainstorms).</li> <li>♦ identify ways in which soil erosion can be controlled or minimized (e.g., by planting trees, by building retaining walls), and create a plan for reducing erosion of soil in a local field or plot.</li> </ul>	Tent C
<b>WHAT'S UP DOC?</b>	WS	A person from medieval times sits wrapped in bandages waiting for some sort of miracle. Students work together to try to determine what waterbourne disease the actor has by asking the person what symptoms they have (similar to the type of questions your own doctor may ask) to determine what might be the problem. Possible ways to avoid the sickness again are discussed as well.	<u>Healthy Living, Grade 4 (Healthy Eating)</u> <ul style="list-style-type: none"> <li>♦ outline the factors that influence body shape and size;</li> <li>♦ explain the role of healthy eating practices, physical activity, and heredity as they relate to body shape and size</li> </ul> <u>Heritage and Citizenship, Grade 4 (Medieval Times)</u> <p>ask pertinent questions to gain information; compare environmental causes of pollution in medieval times and today</p> <u>Language, Grade 4 (Oral and Visual Communication)</u> <ul style="list-style-type: none"> <li>♦ use some vocabulary learned in other subject areas in simple contexts;</li> <li>♦ listen to others and stay on topic in group discussion;</li> <li>♦ communicate a main idea about a topic and describe a short sequence of events</li> </ul>	Outside

ACTIVITY	THEME	DESCRIPTION	LEARNING EXPECTATIONS	LOCATION
<b>WHERE IT GOES... WHEN I GO</b>	WT	Students discover for themselves the process that sewage and wastewater takes in a wastewater treatment plant before it is safely returned to our waterways. This hands-on activity takes them through the processes without leaving the premises. Photos of actual local treatment plants are included for relating to the working model.	<p><u>Matter and Materials <b>Grade 4</b> (Materials That Transmit, Reflect, or Absorb Light or Sound)</u></p> <ul style="list-style-type: none"> <li>♦ identify different types of light observed in the immediate environment (e.g. neon lights, rainbows, flashlights) and compare them (e.g. with respect to colour, intensity)</li> <li>♦ use appropriate vocabulary, including correct science and technology terminology, in describing their investigations, explorations, and observations (e.g., use terms such as <i>translucent</i>, <i>opaque</i>, <i>reflection</i>, <i>absorption</i>, and <i>conductivity</i> to describe properties of materials in relation to light and sound;</li> </ul> <p><u>Structures and Mechanisms <b>Grade 4</b> (Pulleys and Gears)</u></p> <p>describe using their observations, the functions of pulley systems and gear systems</p> <p>formulate questions about and identify needs and problems related to structures and mechanisms in their environment, and explore possible answers and solutions</p> <p>demonstrate awareness that most mechanical systems are fixed and dependent on structures</p>	Tent A
<b>YOU'RE MOSTLY WATER</b>	WS	Students will discover how much of their body mass is made up of water. Using a teeter-totter, and water bottles, they will be able to calculate the amount of water in their bodies.	<p><u>Number Sense and Numeration, <b>Grade 4</b> (Computation)</u></p> <ul style="list-style-type: none"> <li>♦ select and perform computation techniques appropriate to specific problems involving whole numbers and decimals,</li> <li>♦ and determine whether the results are reasonable</li> <li>♦ solve problems involving whole numbers and decimals, and describe and explain the variety of strategies used</li> </ul> <p><u>Measurement, <b>Grade 4</b> (Capacity, Volume and Mass)</u></p> <ul style="list-style-type: none"> <li>♦ demonstrate an understanding of and an ability to apply appropriate metric prefixes in measurement and estimation activities</li> <li>♦ solve problems related to their day to day environment using measurement and estimation</li> </ul>	Tent C